

WHAT IS CLAIMED IS:

1. A radio knife comprising:

an electrically insulative flexible sheath having  
a distal end portion and a proximal end portion, the  
5 distal end portion of the sheath having a distal  
opening and an axis;

an electrically insulative insulating tip which  
closes the distal opening of the sheath, the insulating  
tip having a slide hole with a diameter smaller than  
10 that of the distal opening extending along the axis  
thereof;

an operating wire axially movable in the sheath;

an electrode portion which has a distal end  
portion and a proximal end portion and of which at  
15 least a part forms a rod-shaped portion, the proximal  
end portion of the electrode portion being coupled to  
the operating wire, the rod-shaped portion being passed  
through the slide hole for axial projection and  
retraction;

20 a control section which is provided on the  
proximal end portion of the sheath and controls the  
operating wire to project and retract the electrode  
portion in the axial direction, the control section  
having a high-frequency current supply portion which  
25 supplies a high-frequency current to the electrode  
portion;

a liquid feed portion which is provided on the

proximal end side of the sheath and feeds a liquid into the sheath; and

openings for liquid feed which are formed in the insulating tip and prevent the rod-shaped portion from inserting therein.

2. A radio knife according to claim 1, wherein the sheath has a single bore which is inserted in the operating wire.

3. A radio knife according to claim 1, wherein the insulating tip is located so that the openings for liquid feed communicate with the slide hole.

4. A radio knife according to claim 3, wherein the slide hole of the insulating tip is formed of a polygonal opening in which the rod-shaped portion is inscribed, the other parts of the polygonal opening than that part which is occupied by the rod-shaped portion forming the openings for liquid feed.

5. A radio knife according to claim 3, wherein the insulating tip is formed having a plurality of straight openings extending radially outward from slide hole, the respective inner end portions of the openings being coupled to the slide hole, each of the straight openings having a width such that the opening prevent the electrode portion from inserting therein.

25 6. A radio knife according to claim 1, wherein the openings for liquid feed in the insulating tip are arranged around and independently of the slide hole.

7. A radio knife according to claim 1, wherein the sheath has an extending portion extending ahead of the insulating tip, the extending portion having an internal space which stores the electrode portion.

5       8. A radio knife according to claim 1, wherein the electrode portion has an extending portion located on the distal end portion of the rod-shaped portion and extending across the extending direction of the rod-shaped portion.

10      9. A radio knife according to claim 8, wherein the extending portion is a hooked bent portion extending substantially at right angles to the distal end portion of the rod-shaped portion.

15      10. A radio knife according to claim 8, wherein the extending portion is a platelike electrode portion coupled to the distal end portion of the rod-shaped portion.